

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. 2001-NM-17-AD; Amendment 39-12968; AD 2002-24-03]**

**RIN 2120-AA64**

### **Airworthiness Directives; Boeing Model 747 Series Airplanes Powered by General Electric (GE) CF6-80C2 Series Engines**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule.

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**SUMMARY:** This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 747 series airplanes powered by GE CF6-80C2 series engines, that requires repetitive inspections and torque checks to find discrepancies of the fasteners that attach the diagonal brace fittings of the lower spar to the inboard engine struts, and modification of the fasteners if discrepancies are found. This amendment also requires eventual modification of all the fasteners, which ends the repetitive inspections and checks. The actions specified by this AD are intended to find and fix discrepant fasteners of the diagonal brace fittings, which could result in reduced structural integrity of the diagonal brace-to-strut attachment, and possible separation of the strut and engine from the airplane. This action is intended to address the identified unsafe condition.

**DATES:** Effective January 7, 2003.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of January 7, 2003.

**ADDRESSES:** The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Tamara Anderson, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2771; fax (425) 227-1181.

**SUPPLEMENTARY INFORMATION:** A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain Boeing Model 747 series airplanes powered by General Electric CF6-80C2 series engines was published in the Federal Register on August 30, 2002 (67 FR 55739). That action proposed to require repetitive inspections and torque checks to find discrepancies of the fasteners that attach the diagonal brace fittings of the lower spar to the inboard engine struts, and modification of the fasteners if discrepancies are found. That action also proposed to require eventual modification of all the fasteners, which would end the repetitive inspections and checks.

## **Comments**

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were submitted in response to the proposal or the FAA's determination of the cost to the public.

## **Conclusion**

The FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

## **Explanation of Editorial Change**

We have changed the service bulletin citation throughout this final rule to exclude the Evaluation Form. (The form is intended to be completed by operators and submitted to the manufacturer to provide input on the quality of the service bulletin; however, this AD does not include such a requirement.)

## **Cost Impact**

There are approximately 237 airplanes of the affected design in the worldwide fleet. We estimate that 14 airplanes of U.S. registry will be affected by this AD.

It will take approximately 5 work hours per airplane to accomplish the inspection and torque check at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the required actions on U.S. operators is estimated to be \$4,200, or \$300 per airplane, per inspection/check cycle.

It will take approximately 76 work hours per airplane to accomplish the terminating action at an average labor rate of \$60 per work hour. Required parts will cost approximately \$4,268 per airplane. Based on these figures, the cost impact of this required action on U.S. operators is estimated to be \$123,592, or \$8,828 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

## **Regulatory Impact**

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

2. Section 39.13 is amended by adding the following new airworthiness directive:

# AIRWORTHINESS DIRECTIVE

Aircraft Certification Service  
Washington, DC



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "[www.airweb.faa.gov/rgl](http://www.airweb.faa.gov/rgl)"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2002-24-03 Boeing:** Amendment 39-12968. Docket 2001-NM-17-AD.

**Applicability:** Model 747-200B, -300, -400, -400D, and -400F series airplanes powered by General Electric CF6-80C2 series engines, as listed in Boeing Alert Service Bulletin 747-54A2207, dated November 16, 2000, certificated in any category.

**Note 1:** This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

**Compliance:** Required as indicated, unless accomplished previously.

To find and fix discrepant fasteners of the diagonal brace fittings, which could result in reduced structural integrity of the diagonal brace-to-strut attachment, and possible separation of the strut and engine from the airplane, accomplish the following:

## **Repetitive Inspections and Torque Checks/Corrective Action**

(a) Do a detailed inspection and torque check to find discrepancies of the fasteners (e.g., loose, fractured, or missing fastener heads) that attach the diagonal brace fittings of the lower spar to the inboard engine struts, at the applicable time specified in paragraph (a)(1) or (a)(2) of this AD, per Boeing Alert Service Bulletin 747-54A2207, dated November 16, 2000, excluding Evaluation Form. Repeat the inspection and check after that every 8,000 flight hours or 24 months, whichever is first.

**Note 2:** For the purposes of this AD, a detailed inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

(1) For airplanes that have not been modified as required by AD 95-13-06, amendment 39-9286 (all Group 2 airplanes): Before the accumulation of 6,000 total flight cycles or within 24 months after the effective date of this AD, whichever is later.

(2) For airplanes that have been modified as required by AD 95-13-06 (all Group 1 airplanes): Before the accumulation of 6,000 total flight cycles after doing the modification or within 24 months after the effective date of this AD, whichever is later.

(b) If no discrepancy is found during any inspection/check required by paragraph (a) of this AD, repeat the inspection/check at the time specified in paragraph (a) of this AD until the terminating action specified in paragraph (c) of this AD is done. If any discrepancy is found, do the applicable actions specified in paragraph (b)(1) or (b)(2) of this AD.

(1) If any discrepancy is found in the area that connects the diagonal brace fitting to the aft bulkhead, before further flight, repair per a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA; or per data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative (DER) who has been authorized by the Manager, Seattle ACO, to make such findings. For a repair method to be approved, as required by this paragraph, the approval must specifically reference this AD.

(2) If any discrepancy is found in any area other than that specified in paragraph (b)(1) of this AD, before further flight, do the terminating action specified in paragraph (c) of this AD.

### **Terminating Action**

(c) Except as provided by paragraph (b)(2) of this AD, within 72 months after the effective date of this AD: Do the modification (including doing a high frequency eddy current (HFEC) inspection, oversizing the fastener holes, and installing new fasteners) as specified in and per Figure 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-54A2207, dated November 16, 2000, excluding Evaluation Form. If any cracking is found during the HFEC inspection and the service bulletin specifies contacting Boeing for repair procedures, before further flight, repair per a method approved by the Manager, Seattle ACO; or per data meeting the type certification basis of the airplane approved by a Boeing Company DER who has been authorized by the Manager, Seattle ACO, to make such findings. For a repair method to be approved, as required by this paragraph, the approval must specifically reference this AD. Accomplishment of the actions specified in this paragraph ends the repetitive inspections and checks.

### **Alternative Methods of Compliance**

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

**Note 3:** Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

### **Special Flight Permits**

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

## **Incorporation by Reference**

(f) Except as provided by paragraphs (b)(1) and (c) of this AD, the actions shall be done in accordance with Boeing Alert Service Bulletin 747-54A2207, dated November 16, 2000, excluding Evaluation Form. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

## **Effective Date**

(g) This amendment becomes effective on January 7, 2003.

Issued in Renton, Washington, on November 20, 2002.

Ali Bahrami,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 02-30343 Filed 12-2-02; 8:45 am]

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